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審査請求　未請求

（全 3 頁）

⑤螺旋状溝を有する部材

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㊧実用新案登録請求の範囲

(1) 外周部に螺旋状溝を有するものにおいて、前記螺旋状溝の進み角が不均等になつていることを特徴とする螺旋状溝を有する部材。

(2) 実用新案登録請求の範囲第(1)項記載において、前記螺旋状溝の進み角の大きい部分と小さい部分とが交互に設けられていることを特徴とする螺旋状溝を有する部材。

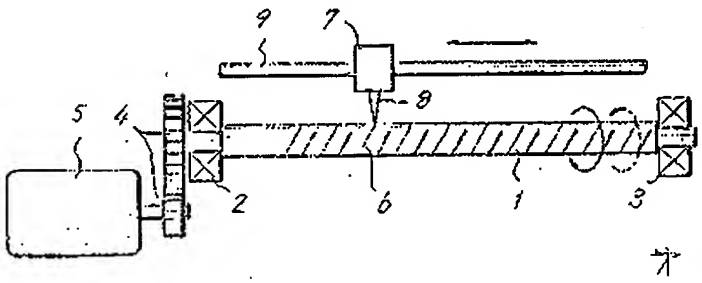
(3) 実用新案登録請求の範囲第(2)項記載において、前記進み角の小さい部分の進み角が零であることを特徴とする螺旋状溝を有する部材。

図面の簡単な説明

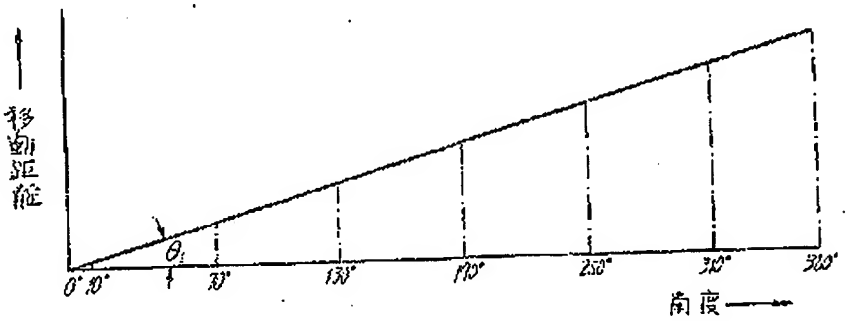
第1図は送り機構の概略構成図、第2図は従来のネジ部材の進み角を示す説明図、第3図および第4図は本考案の第1実施例に係るネジ部材の正面図および右側面図、第5図はそのネジ部材の進み角を示す説明図、第6図および第7図は本考案の他の実施例に係るネジ部材の進み角を示す説明図である。

1……ネジ部材、6……螺旋状溝、10……傾斜溝部、11……水平溝部、12……緩傾傾斜溝部。

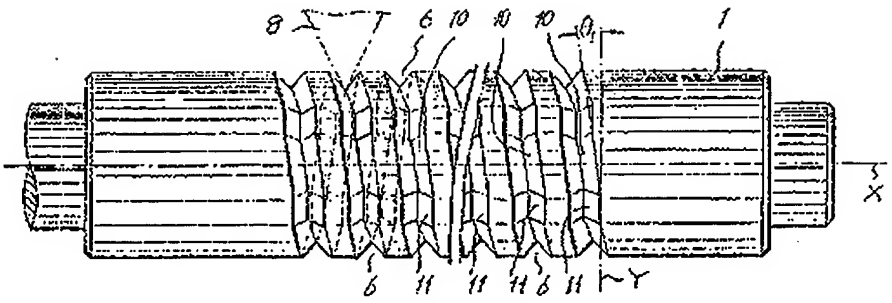
第1図



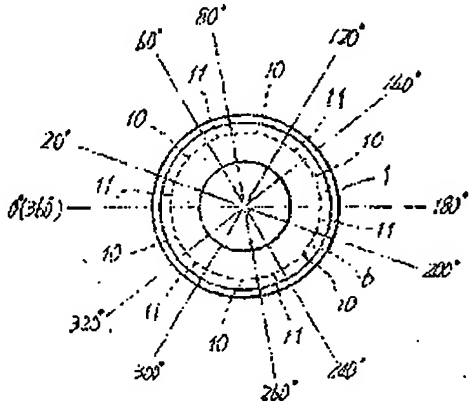
第2図



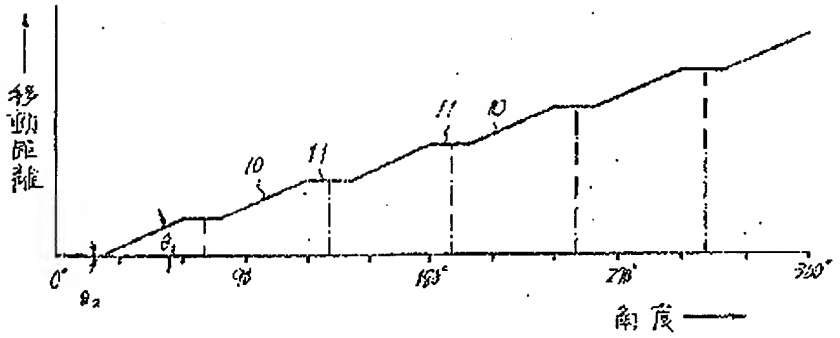
第3図


8
7
6
10
10
10
1
X
Y
6
11
11
11
6
11

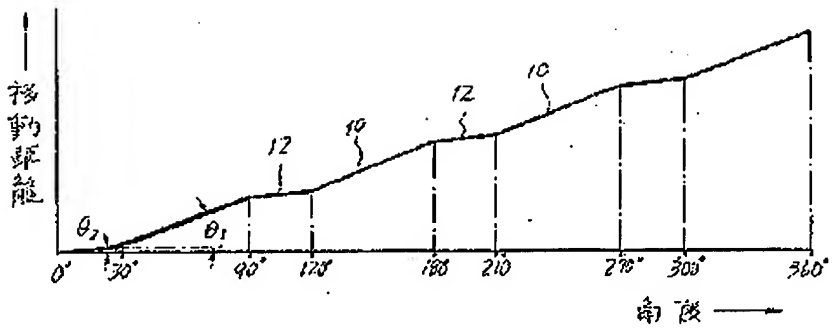
第4図


80°
60°
120°
140°
20°
0°(360°)
180°
200°
325°
300°
260°
240°
1
10
11

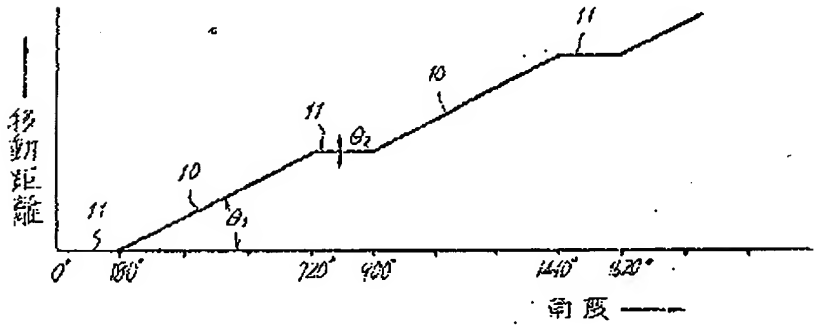
第5図


移動距離
10
11
11
10
θ1
θ2
0°
90°
180°
270°
360°
角度

第6図


移動距離
12
10
12
10
θ2
θ1
0°
30°
90°
120°
180
210
270°
300°
360°
角度

第7図


移動距離
11
10
11
θ2
10
11
θ1
0°
180°
720°
900°
1440°
1620°
角度

Japanese Utility Model Laid Open No.92253/1984

Japanese Utility Model Laid Open No.92253/1984

Member having a spiral groove

What is claimed is:

1. A member having a spiral groove characterized by the uneven angle of the spiral groove in the member having a spiral groove in the outer circumference.

2. A member having a spiral groove recited in claim 1, wherein a small part and a large part of the angles of the said spiral groove are alternately set up.

3. A member having a spiral groove recited in claim 2, wherein a small part of the angle of the said spiral groove is zero.

Description of the Utility model

This idea relates to a member having a spiral groove apt to, for example an intermission feed mechanism. The first figure is the outline block diagram of the feed mechanism provided with the screw member 1. One end of the screw member 1 constructed between the bearing 2 and 3 is connected to a driving motor 5 through the gear group 4, whereby the screw member 1 is run in reverse. The tip 8 held on the bottom edge of the movement member 7 possibly has engagement given by the spiral groove 6 formed in the circumference of the screw member 1. A guide bar 9 is installed in parallel with the screw member 1, and a guide bar 9 goes through the movement member 7. Therefore, a movement member 7 learns to do by the guidance of the guide bar 9 within the fixed territory by or running it in reverse. When an intermission feed wants to do a movement member 7 in this feed mechanism in a fixed pace, energizing to the motor 5 is done intermittently, and a fixed direction can do a movement member 7 by intermission's whereby rotating a screw member 1 as to the intermission feed.

By the way, the usual screw member 1 being used for this feed mechanism is designed to become a straight line-shaped when a spiral groove 6 went into the circumference as shown in the second figure and had the same angle of lead $\theta 1$ and a spiral groove 6 was developed. Because of that, when for example I want to suspend the movement of the movement member 7 from the viewpoint of intermission in 6 place of 10° 70° 130° 190° 250° 310° on the corner of the rotation of the screw member 1, due to the dispersion on the corner of the rotation of the screw member 1 or the deviation. And, it is in proportion, and the position of the movement member 7 deviates, too, and a stop in the proper position can't be sometimes done, and there is a problem in the reliability. The motor whose precision is high is necessary, and becomes expensive to reduce these because a feed error due to the roll control deviation of the motor tends to occur as mentioning above again. There is a purpose of this idea to provide the member which had the spiral groove that different use was possible with dissolving a fault of such before technology. This idea makes the matter that the angle of lead of the spiral groove set up in the circumference part is uniformly characteristics to attain this purpose. It explains about the embodiment of this idea subsequently. As for the third figure, the right side figure of the screw member 1 and the fifth figure are the explanatory drawings which show the angle of lead of that screw member 1 by the thing to explain the first embodiment of this idea as for the front elevation of the screw member 1 and the fourth figure. Though it is formed by the circumference part of the screw member 1 for the fixed range as shown in the third figure, as for this spiral groove 6, with the inclination groove department 10 which has a fixed angle, that is, an angle of lead $\theta 1$ to the perpendicular Y which axis X of the screw member 1. An angle of lead $\theta 2$ is composed by the horizontal groove department 11 of the cipher to the above perpendicular Y. As for the above inclination groove department 10 and the horizontal groove department 11, it is formed as shown in the 4th figure and the 5th figure each 6 within 1 lap of the spiral grooves 6

alternately, and a horizontal groove department 11 is held in each of the inclination groove departments 10 in the range of 40° in the range of 20° . As shown in the third figure, the tip department 8 of the movement member 7 possibly has engagement given by the spiral groove 6 of this screw member 1. The precision of the motor isn't required so high, either, and even a cheap motor is available from such. The sixth figure is the explanatory drawing which shows the angle of lead of the screw member 1 which affects the second embodiment of this idea. The point which is different from the above 1 embodiment with this embodiment is the point which extreme sooth inclination groove department 12 whose angle of lead $\theta 2$ is very small is held in instead of the horizontal groove department 11. A movement is done in the inclination groove department 10 in case of this embodiment as well, and the intermission feed of the movement member 7 is done by suspension of a movement being made in extreme sooth inclination groove department 12. A position of a stop of the movement member 7 hardly deviates even if the corner of the rotation of the screw member 1 deviates a little at the time of the stop because the angle of lead $\theta 2$ of extreme sooth inclination groove department 12 is very small as mentioning above. The 7th figure is the explanatory drawing which shows the angle of lead of the screw member 1 which affects the 3rd embodiment of this idea. In case of this embodiment, in front of the spiral groove 6 of the 1st lap, half (0° -180 °), an angle of lead $\theta 2$ is the horizontal groove department 11 of the cipher. It continues, and it is the inclination groove department 10 of the angle of lead $\theta 1$ after the first lap from half until the end of the second lap side. This horizontal groove department 11 and an inclination groove department 10 are held alternately, and the spiral groove 6 of one article is constructed. The stop position precision of the movement member is enhanced when this idea is a composition like mentioning above and the member which for example has the spiral groove of this idea is used for the intermission feed mechanism and so on. Even if the expensive motor of the high accuracy again isn't used, it can work for the decrease of the cost well. As for the first figure, the explanatory drawing which shows the angle of lead of the usual screw member, and the third figure and the fourth figure are the front elevation of the screw member which affects the first embodiment of this idea and the right side figure as for the outline block diagram of the feed mechanism and the second figure. As for the fifth figure, the explanatory drawing which shows the angle of lead of that screw member, and the sixth figure and the seventh figure are the explanatory drawings which show the angle of lead of the screw member which affects an alien embodiment of this idea.